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January 12, 1994

C T I A



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Commissioner Ervin S. Duggan
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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Building The
Wireless Future

Thomas E. Wheeler
President CEO

Re: Ex Parte Filing
GEN Docket No. 90-314
Personal Communications Services

Dear Ervin:

As the Commission moves toward concluding its Personal Communications Services (PCS) proceeding, we call your attention to the need to refine this initial PCS decision in order to realize the promise of PCS.

Specifically, the Commission should:

- ◆ modify the PCS *Second Report and Order* to create four 20 MHz blocks while maintaining four 10 MHz blocks.
- ◆ modify the preconditions for PCS licensing, to allow the public to benefit from the economies of scale and scope acknowledged in the *Second Report and Order*.
- ◆ use a BTA-based geographic market regime for all licenses as opposed to advantaging some licensees with MTA-based supersystems.

These refinements will better serve the Commission's own goals -- achieving "universality; speed of deployment; diversity of services; and competitive delivery" --and the statutory objective of providing opportunities for small, women, minority and rural enterprises to participate in the telecommunications marketplace. Additional benefits will include generating new jobs and economic growth, and producing higher Treasury revenues.

Attached is a primer outlining the advantages of these proposals, and demonstrating the deficiencies of the existing regime and the assumptions underlying it.

Adoption of these refinements will produce a more productive and inclusive regime, consistent with the Commission's goals and the weight of the evidence -- and faithful to the statutory timetable.

Very truly yours,


Thomas E. Wheeler

Attachment

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PCS WHITE PAPER No. 1
Second Series

**Building The
Wireless Future**

Building a Sound Foundation for PCS

January 12, 1994

Building a Sound Foundation for PCS

Compelling reasons support immediate refinement of the Commission's PCS rules.

The Commission's own goals and the weight of the evidence call for several refinements of the Personal Communications Service (PCS) regime. Specifically, the Commission should:

- modify the PCS *Second Report and Order* to create four 20 MHz blocks while maintaining four 10 MHz blocks.
- modify the preconditions for PCS licensing, to allow the public to benefit from the economies of scale and scope acknowledged in the *Second Report and Order*.
- use a BTA-based geographic market regime for all licenses as opposed to advantaging some licensees with MTA-based supersystems.

These refinements will better serve the Commission's own goals of "universality; speed of deployment; diversity of services; and competitive delivery" of PCS services; provide opportunities for small, women, minority and rural enterprises to participate in the information age telecommunications marketplace; create jobs; and generate greater Treasury revenues.

These refinements are supported by the weight of the evidence -- the majority of commentors having endorsed smaller spectrum blocks of 10 MHz to 20 MHz, and smaller licensing areas.

Furthermore, adoption of these refinements will resolve inconsistencies within the rationale for the PCS regime -- while remaining faithful to the statutory timetable for initiation of PCS licensing.

Large Areas and Large Blocks May Lock Up The Market -- and Spectrum

The Commission can be faithful to its mandates to foster competition and innovative technologies, and its objective of promoting the efficient use of the spectrum resource, by utilizing "building blocks" instead of tying up vast amounts of spectrum or geography in a single license. In fact, the *Second Report and Order* and Commissioner Barrett's dissent note that *the majority of commentors supported both smaller service areas and smaller spectrum blocks of 20 MHz or less.*

Under such a "building block" approach, it would be possible for those requiring increased spectrum of frequency to purchase the necessary number of building blocks. The Commission *should* permit would-be service providers to bid for both geographic markets and spectrum blocks in whatever number as will permit them to configure their markets and services to best advantage.

But, the Commission should *not* pre-suppose that all such markets must be MTAs, nor should it pre-suppose that all providers will require or make the best use of 30 MHz blocks. If bidders wish to acquire blocks of such size, the Commission should permit them to bid for

20 MHz and 10 MHz (or three 10 MHz) blocks. Likewise, if bidders wish to deploy services which will use 40 MHz of spectrum, they should be free to bid for the necessary 20 MHz blocks.¹

A 30 MHz block should not be presumed to be the necessary minimum for deploying service. In fact, in adopting 20 MHz and 10 MHz spectrum blocks the Commission conceded that both were sufficient for viable PCS services, and it should not simultaneously assume that 30 MHz is a necessary predicate for service. It should adopt four 20 MHz and four 10 MHz blocks, and allow prospective service providers to bid for the blocks necessary to deliver their target services. In conjunction with the auction proceeding, such a refinement of the PCS regime will provide parties with the "flexibility to match an applicant's specific needs with spectrum [and] should promote efficient use of the spectrum resource." *Second Report and Order*, at para. 59.

Small Blocks Can Sustain Viable Services

As NEXTEL, PowerSpectrum and other commentators have argued in the PCS proceeding, a wide range of services can be provided via spectrum-efficient technologies. In fact, many of these companies are preparing to offer service using digital technology and smaller blocks of spectrum.

For example, CenCall, Dial Page, Geotek, NEXTEL, Pittencrief and numerous other nascent Enhanced Specialized Mobile Service (ESMR) providers have assembled a *total* of 5 MHz to 10 MHz each as the basis for their next generation of wireless services.

Dial Page's recent acquisitions in Florida will give it the equivalent of 3.5 to 5 MHz in those markets.² Geotek's acquisition of Metro Net Systems' 800 MHz SMR channels in New York will give Geotek an additional 3.5 MHz in the New York area, beyond its existing 900 MHz channels.³ And CenCall has announced an agreement to acquire the equivalent of 10 MHz in the St. Louis area.⁴

These companies are building viable businesses on 10 MHz or less of spectrum and digital technology, thus demonstrating the unnecessariness of the Commission's 30 MHz blocks.

This is possible because digital systems provide much greater capacity than analog cellular systems. For example, *Code Division Multiple Access* (CDMA) uses a low-power signal spread across a designated bandwidth, and assigns codes to the calls to ensure proper delivery. CDMA is estimated to increase capacity by at least ten times the capacity of analog cellular

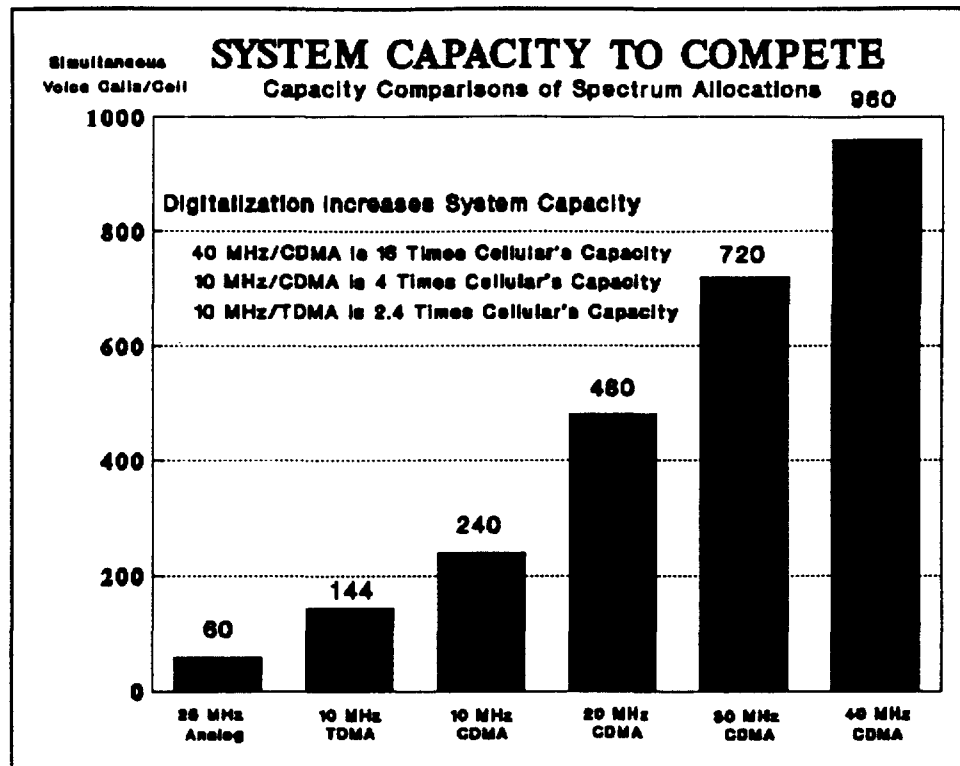
¹To the extent that 40 MHz is held necessary to deliver some services, the Commission should clarify that all providers may reach such a cap.

²*PRNewswire*, October 25, 1993.

³*Telocator Bulletin*, October 22, 1993, at p.6.

⁴*Standard & Poor's Daily News*, November 9, 1993.

systems. *Time Division Multiple Access* (TDMA) splits a signal into pieces and, by assigning the parts to different time slots, permits a single channel to be used to deliver three simultaneous messages. Through engineering techniques, a 10 MHz TDMA system can carry 144 simultaneous voice calls compared to a 25 MHz analog cellular system's 60 calls.



These facts should militate against overly-large allocations *as the default standard*. As the history of other proceedings indicates, assignment of blocks with insufficient attention to spectrum efficiency can cause future problems in trying to find spectrum for new applications.

BTAs Are Better Building Blocks Than MTAs

The Commission should not presume that MTAs are the best model for geographic PCS markets. Rand McNally's 47 MTAs and 487 BTAs were originally designed around principles which are disassociated from wireless communications needs -- e.g., newspaper circulation patterns, banking deposits, and other unrelated factors like railroads.⁵ Nonetheless, the Commission over-rode the arguments of the majority of commentators that the existing cellular license areas were the most appropriate geographic markets for PCS services.

The Advantages of BTAs: BTAs will facilitate the entry of small, minority, women, and rural enterprises into the telecommunications marketplace. Entry on a BTA-basis will also foster market-specific service offerings, and increase the likelihood that rural areas will be served.

⁵See Comments of Rand McNally on Petitions for Reconsideration and Clarification, GEN Docket No. 90-314, filed January 3, 1994, at p.4.

After all, a nationwide provider could claim to reach 75 % of the American people, without ever offering service to the residents of rural America.

The Problem with MTAs: MTAs will not facilitate the entry of smaller companies -- indeed, they are probably beyond the financial means to buy and build of all but a few companies. Other reasons for adopting MTAs, such as the notion that they may facilitate regional and nationwide roaming, rest on a simple and false assumption: that smaller areas are incompatible with roaming. To the contrary, cellular companies have already proven that such smaller areas as MSAs and RSAs are completely compatible with roaming. *Industry-wide, over twelve percent of annual cellular revenues are generated by roamers, rising to 31 percent for small operators* -- something which would not be true if roaming was inhibited by small license areas.

Likewise, the argument that such broad geographic areas as MTAs are required to prevent the balkanization of the communications system collapses in the face of the actual form and framework of the American telecommunications marketplace.

The United States is served by over 1400 local telephone companies with over 11,000 local landline exchanges, by 350 cellular companies operating 1508 systems, and by dozens of interexchange carriers serving anywhere from a single state to all 50 states and international markets. And dozens more competitive access providers (CAPS), private internal communications networks, and nascent fiber- or satellite-based systems are in operation, or are being prepared for rollout.

If a multi-provider, multi-market telecommunications system was doomed because it would be inherently a balkanized and incompatible hodge-podge of networks, the United States would be unserved today -- or would be served by only a single, integrated company. Reality is far different -- and was so even when the telecommunications industry was a nominal monopoly -- for even then over 1500 telephone companies served the country.

The Licensing Preconditions Are At Odds With The PCS Rationale and Goals

The PCS licensing preconditions are overly strict, and constitute hurdles which will frustrate the Commission's own PCS goals of diversity, universality, and economy. The Commission should revisit its decision to define investors and owners as cellular companies on the basis of a 20 % interest in a cellular company, and limit their eligibility for spectrum licenses if there is a population overlap of 10 % between the cellular and PCS market.

These conditions are arbitrary and capricious, being unconnected with indicia of actual control, with opportunities for theoretical misconduct, or with traditional standards of market power measurement. For example, the Department of Justice's Merger Guidelines do not even consider a matter ripe for review until a threshold of 30-35 % is reached.

The Commission's PCS licensing preconditions fly in the face of the Commission's own conclusions and accepted antitrust standards, in effect borrowing trouble unnecessarily. Existing laws and regulations stand ready to correct any incident, or tendency toward abuse of market power should it occur, while refinement of the Commission's rules will ensure that another unintended consequence will not result -- the elimination of venture capital and other investment

funds from availability to small, women, minority and rural enterprises because of the *investors'* classification as cellular companies under the Commission's attribution rules.

The Commission's rules would otherwise become a policy at war with itself -- summoning companies to create a new information age infrastructure, while discouraging investors to commit to the funding of that infrastructure; enhancing concentrated powerhouses of information-generation, while discouraging broad participation in developing systems for distributing that intelligence.

A more productive regime -- consistent with the Commission's goals and the weight of the evidence -- is attainable by drawing upon existing safeguards and standards.

The Commission can recognize that passive investments do not constitute control, and substitute an attribution threshold of 30-35 % for its current rule, without sacrificing the public interest in either competition or its benefits.

Likewise, by raising the overlap threshold from 10 % to 40 %, the Commission can reconcile its PCS standard with antitrust standards, without eliminating safeguards against abuse of market power.

January 12, 1994



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Mr. William F. Caton
Acting Secretary
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Re: Ex Parte Filing
Personal Communications Services
GEN Docket No. 90-314

**Building The
Wireless Future**

Dear Mr. Caton:

On Wednesday, January 12, 1994, the Cellular Telecommunications Industry Association ("CTIA") sent the attached letters, transmitting PCS White Paper No. 1, Second Series, *Building a Sound Foundation for PCS*, to the FCC Commissioners and staff listed below.

Daniel Abeyta
Rudy Baca
Beverly Baker
Andrew Barrett
Thomas Beers
Lauren Belvin
James Bennett
Karen Brinkmann
Kelly Cameron
John Cimko
Rodney Small
Randy Coleman
Robert Corn-Revere
Diane Cornell
Ervin S. Duggan
Brian Fontes
Bruce Franca
David Furth
Bart Gorman
Sheldon Guttman
Ralph Haller
Jeffrey Hoagg
John Hollar
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Byron Marchant
Steve Markendorff
Roland Martin
Geraldine Matise
Maura McGowan
Ruth Milkman
Tom Mooring
Kent Nakamura
Linda Oliver
Myron Peck
Dr. Robert Pepper
James Quello
David Reed
Jill Ross-Meltzer
Sarah Siedman
David Siddall
Richard Smith
David Solomon
Thomas Spavins
Merrill Spiegel
Dr. Tom Stanley
Gerald Vaughan
Greg Vogt
John Williams
John Winston

Mr. Caton
January 12, 1994
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The views expressed in this document reflect CTIA's position as previously filed in this proceeding.

If there are any questions in this regard, please contact the undersigned.

Sincerely,


Robert F. Roche

Enclosure